

WHAT IS CLAIMED IS:

1. A driving circuit for an electronically switched motor, said driving circuit comprising:
 - a supply voltage rectifying stage for providing a rectified supply voltage;
 - first and second control blocks;
 - first switching means for switching state based on at least one output signal of the first control block;
 - magnetic means for providing a magnetic flux according to the state of the first switching means;
 - a plurality of transmission diodes for transmitting an exciting current that flows through the magnetic means;
 - first energy storing means for storing the exciting current flowing through the plurality of diodes;
 - an energy return stage for transferring the energy stored in the first energy storing means to the rectifying stage;
 - second switching means controlled by an output signal of the second control block;
 - and
 - energetic conversion means for receiving the energy stored in the energy storing means through the second switching means that is controlled by the output of the second control block, so as to provide a current as sinusoidal as possible.
2. The driving circuit according to claim 1, wherein the energetic conversion means includes a high frequency transformer having a predetermined spire ratio.
3. The driving circuit according to claim 1, wherein the second switching means is in series with at least one part of the energetic conversion means.

4. The driving circuit according to claim 1, wherein the first switching means and the second switching means are in low side configuration.
5. The driving circuit according to claim 1, wherein the second control block provides the output signal that controls the second switching means according to a pulse width modulation driving technique.
6. The driving circuit according to claim 1, wherein the second control block provides the output signal that controls the second switching means according to a hysteresis driving technique.
7. The driving circuit according to claim 1, wherein the first switching means and the second switching means are formed by bipolar transistors each having its emitter electrode connected to ground.
8. The driving circuit according to claim 1, wherein the first switching means and the second switching means are formed by MOSFET transistors each having its source electrode connected to ground.
9. The driving circuit according to claim 1, wherein the first switching means and the second switching means are formed by IGBT transistors each having its source electrode connected to ground.
10. The driving circuit according to claim 1, wherein the first control block and the second block are portions of a single control block.

11. An electronically switched motor including a driving circuit, said driving circuit comprising:

- a supply voltage rectifying stage for providing a rectified supply voltage;
- first and second control blocks;
- first switching means for switching state based on at least one output signal of the first control block;
- magnetic means for providing a magnetic flux according to the state of the first switching means;
- a plurality of transmission diodes for transmitting an exciting current that flows through the magnetic means;
- first energy storing means for storing the exciting current flowing through the plurality of diodes;
- an energy return stage for transferring the energy stored in the first energy storing means to the rectifying stage;
- second switching means controlled by an output signal of the second control block; and
- energetic conversion means for receiving the energy stored in the energy storing means through the second switching means that is controlled by the output of the second control block, so as to provide a current as sinusoidal as possible.

12. The motor according to claim 11, wherein the energetic conversion means includes a high frequency transformer having a predetermined spire ratio.

13. The motor according to claim 11, wherein the second switching means is in series with at least one part of the energetic conversion means.

14. The motor according to claim 11, wherein the first switching means and the second switching means are in low side configuration.

15. The motor according to claim 11, wherein the second control block provides the output signal that controls the second switching means according to a pulse width modulation driving technique.

16. The motor according to claim 11, wherein the second control block provides the output signal that controls the second switching means according to a hysteresis driving technique.

17. The motor according to claim 11, wherein the first switching means and the second switching means are formed by bipolar transistors each having its emitter electrode connected to ground.

18. The motor according to claim 11, wherein the first switching means and the second switching means are formed by MOSFET transistors each having its source electrode connected to ground.

19. The motor according to claim 11, wherein the first switching means and the second switching means are formed by IGBT transistors each having its source electrode connected to ground.

20. The motor according to claim 11, wherein the first control block and the second block are portions of a single control block.